

prolonged, tubiform, slightly tapering, and curved downwards, the distance between the eye and the end of the mandibular flap being twice that between the eye and the gill-opening. The mouth is very small, at the extremity of the snout, with the jaws equal, and armed with two pairs of feeble conical teeth above and below. The mandibular flap is as long as the eye. The eye is covered with the skin, but appears through from below it. The pectoral is nearly twice as long as the ventral, and extends beyond its base. The dorsal and anal fins are opposite each other, and placed on the caudal portion of the body, the origin of the former being in the middle between the occiput and the root of the caudal. The scales on the trunk are rather small and irregularly arranged, but become gradually larger and more regular posteriorly. Coloration uniform.

The single specimen obtained is 10 inches long.

We add, for comparison, the diagnosis of the other species mentioned above:—

MORMYRUS PETERSII.

D. 27. A. 34. L. lat. 66. The mandible is prolonged into a long, conical fleshy appendage, which is nearly half as long as the head. Dark brown, with two lighter cross bands.

Hab. Old Calabar.

ON SOME NEW SPECIES OF CENTRAL-AMERICAN FISHES.

BY DR. A. GÜNTHER.

Our Corresponding Member Capt. J. M. Dow having sent to this Society a second collection of Central-American Fishes, a complete series of the species contained therein has been deposited by our Secretary in the British Museum. The following is a list of those which I have examined, a few others having been omitted, as they belong to families in the revision of which I am engaged at present or shall be in a very short time:—

I. Species collected on the Pacific Coast of Panama.

1. *SERRANUS SELLICAUDA*, Gill, sp.
2. *RHYPTICUS MACULATUS*, Holbr.
3. *MESOPRION NOVEN-FASCIATUS*, Gill, sp. Very closely allied to *M. griseus*.
4. *MESOPRION*, n. sp. There are two young specimens of an apparently undescribed form in the collection; but the description and determination are better deferred until more examples have been obtained.

5. *PRISTIPOMA MELANOPTERUM*, C. & V.

6. *PRISTIPOMA DOVII*, n. sp.

D. $\frac{12}{16}$. A. $\frac{3}{9}$. L. lat. 48. L. transv. 8/15. The height of the body is one-half of the total length (without caudal); the length of

the head one-third. Snout obtuse, not much longer than the eye; cleft of the mouth small, the maxillary extending to the vertical from the anterior margin of the orbit. Lips thick; a pair of pores on the symphysis of the lower jaw, a central groove behind it. Snout naked, the remainder of the head being scaly. The width of the interorbital space is much less than that of the orbit. Dorsal and anal spines exceedingly strong; the third of the dorsal fin is the longest, and nearly two-thirds as long as the head. The second anal spine is much longer than the third, and a little shorter (but stronger) than the third of the dorsal fin. Each ray of the soft fins is accompanied by a series of minute scales, but only on the caudal fin are these scales dense enough to cover the rays. Caudal fin slightly emarginate. Silvery, with four black cross bands: the first runs from the occiput through the eye to behind the angle of the mouth; the second from before the dorsal fin to below the base of the pectoral; the third from the base of the sixth, seventh, and eighth dorsal spines to the vent; the fourth descends from the origin of the soft dorsal to that of the soft anal. Fins blackish.

Only one specimen, $8\frac{1}{2}$ inches long, is in the collection.

7. *POLYNEMUS APPROXIMANS* (Lay & Bennett ?).

D. $7\frac{1}{13}$. A. $\frac{3}{15}$. L. lat. 60.

8. *CARANX*, n. sp. There is a young specimen in the collection which appears to belong to an undescribed species closely allied to *C. Carangus* and *C. Hippos*.

9. *CARANX LEUCURUS*, n. sp.

D. $8\frac{1}{28}$. A. $2\frac{1}{24-26}$. Very closely allied to *C. bicolor*. The first dorsal fin is composed of short, stoutish spines, the fourth of which is the longest, but scarcely longer than the eye. The soft dorsal and anal are rather elevated; the caudal is emarginate, and has the lobes rounded. Teeth very small, forming a single series in both jaws; palate smooth. The height of the body is one-half of the total length (without caudal), the length of the head one-third. Snout rather obtuse, the jaws being equal in front when the mouth is closed; the maxillary extends to below the anterior margin of the orbit. The lateral line makes anteriorly a subsemicircular curve, the width of which is contained from $1\frac{2}{3}$ to $1\frac{4}{5}$ times in the length of the straight portion; it becomes straight behind the vertical from the origin of the second dorsal, and is armed with about fifty small and low shields, only a few of which terminate in a depressed spine. The pectoral fin extends to the anal spines. Brownish grey, body with six dark-brown vertical bands: the first crosses the body behind the base of the pectoral, and the fourth descends from the middle of the soft dorsal fin. Operculum with a large black spot. Dorsal, anal, and ventral black; pectoral and caudal whitish.

Only two young specimens are in the collection, the larger being 3 inches long.

10. ? *CARANX DORSALIS*, Gill, sp.

11. *Gobius soporator*, Cuv. & Val.

12. *ELEOTRIS SEMINUDUS*, n. sp.

D. 7|11. A. 9. The head and the trunk are naked; the tail is covered with small scales; head depressed, broader than high, flat above, its length being two-sevenths of the total. Snout rather obtuse, longer than the eye, with the lower jaw somewhat prominent; the cleft of the mouth extends to below the anterior margin of the orbit. Teeth in the upper jaw in a narrow band; the lower has four somewhat larger and recurved teeth in front, the others appear to form a single series; palate toothless. None of the fin-rays are prolonged; the pectoral does not quite extend to the origin of the second dorsal; ventral much shorter than pectoral, its inner ray is the longest, the others gradually decreasing in length outwards; caudal fin rounded. Brown, with numerous well-defined white cross stripes on the head as well as on the body; vertical fins black.

Although there is only a single example, 20 lines long, in the collection, the characters of this species are so well marked that I do not hesitate to describe it.

13. *SALARIAS ATLANTICUS*, Cuv. & Val.

14. *CLINUS DELALANDII*, Cuv. & Val.

15. *CLINUS MACROCEPHALUS*, Gthr.

16. *CREMNOBATES MONOPHTHALMUS*, Gthr.

17. *ATHERINICHTHYS PACHYLEPIS*, n. sp.

D. 4| $\frac{1}{8-8}$. A. $\frac{1}{20-21}$. L. lat. 41. L. transv. 7. The height of the body is nearly equal to the length of the head, and contained five times and a half or five times and a third in the total length (without caudal). The snout is short, not longer than the diameter of the eye, and the cleft of the mouth does not extend backwards to below the anterior margin of the eye. The anterior dorsal is composed of short, feeble spines, and its origin is opposite to the fourth or fifth anal ray. The pectoral fin is much longer than the head. The silvery streak occupies the adjoining halves of the third and fourth series of scales.

Two specimens, 6 inches long, were in the collection.

18. *MUGIL BRASILIENSIS*, Agass.

19. *MUGIL PROBOSCIDEUS*, Gthr.

20. *GOBIESOX RHODOSPILUS*, n. sp.

D. 6. A. 5. C. 8-9. P. 17. A vertical fold of the skin along the lower half of the base of the pectoral; the coracoid is scarcely below the level of the upper margin of the pectoral. The distance of the origin of the dorsal fin from the caudal is contained twice and

two-thirds in its distance from the snout ; the anal commences below the third dorsal ray. A very narrow band of short conical teeth in the upper jaw—one of the lateral teeth being somewhat larger than the others, recurved, canine-like. The lower jaw with a single series of teeth, the anterior being narrow incisors, whilst the outermost on each side is distinctly a canine tooth, corresponding to that in the upper jaw. Rose-coloured, with dark-rose transverse spots, each spot having an edge of deep-red dots.

Two specimens, 18 inches long, are in the collection.

21. *PLATYGLOSSUS DISPILUS*, n. sp.

D. $\frac{9}{11}$. A. $\frac{2}{12}$. L. lat. 28. L. transv. $\frac{2}{9}$. The height of the body equals the length of the head, and is contained four times and one-fourth in the total. Caudal fin rounded, with the lobes very slightly produced. Greenish olive, with a roundish black spot edged with silvery, on the lateral line, below the fifth and sixth dorsal spines ; the side of the head with five or six pearl-coloured streaks, some of which are continued on the body, forming a series of round spots. An oblong variegated blotch behind the pectoral fin : it is composed of three pearl-coloured stripes, enclosing two yellow bands, each of which has an undulated purple edge. No spot in the axil of the pectoral. A short oblique yellowish streak behind the base of each soft dorsal ray ; these streaks form a continuous band on the spinous portion. Anal fin with two or three whitish lines ; caudal with several irregular reddish longitudinal bands, which are convergent behind.

Young specimens are much more plain-coloured ; the black spot on the lateral line, however, is very distinct, and there is another at the root of the caudal.

Capt. Dow's collection contains a single young specimen ; but Mr. Salvin has brought a second, apparently adult, it being $5\frac{1}{2}$ inches long.

22. *PSEUDOJULIS NOTOSPILUS*, n. sp.

D. $\frac{9}{11}$. A. $\frac{3}{12}$. L. lat. 25. L. transv. $\frac{2\frac{1}{2}}{8}$. The height of the body is rather less than the length of the head, and contained four times and a quarter in the total. Dorsal spines pungent ; caudal fin slightly rounded. Brownish or yellowish olive ; young specimens with a silvery band along each side of the trunk, above the pectoral fin. Back with four or five indistinct broad brown cross bars ; a series of blotches on the dorsal fin corresponds to these cross bands, one of them, on the three first soft dorsal rays, being the largest and most distinct ; it is of a deep black colour, and of an ovate form. The corners of the caudal fin are white ; ventral whitish, with a broad blackish outer margin.

One adult specimen, 4 inches long, and several young ones are in the collection.

23. *JULIS LUCASANA*, Gill.

24. *DINEMATICHTHYS MARGINATUS*, Ayres.

25. *MICRODESMUS DIPUS*, n. g. et sp. Of this we have received only a single small example; and as it is not in a perfect state of preservation, we cannot decide whether it should be referred to the Blennoids or Gadoids, or whether it is the type of a distinct family. However, we may hope that Capt. Dow will succeed in obtaining more specimens.

MICRODESMUS.

Body much elongate, eel-like, covered with rudimentary scales; head rather short, with obtuse snout, narrow cleft of the mouth, and prominent lower jaw. Eyes minute. Teeth in both jaws minute; palate toothless. The gill-opening is reduced to a small slit in front of the pectoral fin. Vertical fins united by a membrane, but the caudal can be easily distinguished from the two other fins. Dorsal fin very long, composed of flexible, undivided rays, like the anal. Pectorals short; ventrals thoracic, each reduced to a single ray. Vent in the middle of the total length.

MICRODESMUS DIPUS.

D. 55. A. 34. C. 16. P. 12. V. 1. The depth of the body is about one-eighteenth of the total length; the length of the head one-eleventh. The head is rather compressed, the snout short, the mouth very narrow, and the lower jaw very prominent. The minute eye is lateral and in the anterior third of the length of the head. The dorsal fin commences at a distance from the occiput which is somewhat less than the length of the head; it is nearly even, and the rays are very distinct, the interradiat membrane being thin and transparent. The anal fin commences immediately behind the vent. The caudal rays are much more slender and more closely set than those of the dorsal and anal; the caudal fin is rounded, two-thirds of the length of the head. Pectorals as long as the ventrals, and half as long as the head; the latter fins are close together, and inserted a little behind the root of the pectoral. Upper parts uniform brownish olive.

The single specimen is $4\frac{1}{2}$ inches long.

26. *ANABLEPS DOVII*, Gill.

II. *Species collected at Colon.*

1. *PRISTIPOMA MELANOPTERUM*, Cuv. & Val.
2. *POMACANTHUS PARU*, Gthr.
3. *SPHYRÆNA PICUDA*, Bl. Schn.

III. *Species from the Lake of Managua, Nicaragua.*

1. *HEROS LABIATUS*, n. sp.

D. $\frac{17}{11}$. A. $\frac{8}{8}$. L. lat. 32. L. transv. $\frac{6}{13}$. The anterior portions of the upper and lower lips are much enlarged, each forming a

moveable subtriangular flap. The height of the body is somewhat more than the length of the head, and two-fifths of the total. The mouth is very protractile; the eye occupies the middle of the length of the head. Scales on the cheek in four series. Base of the dorsal almost scaleless. Uniform red, or sometimes red irregularly marbled with black.

The largest specimen is 7 inches long.

MISCELLANEOUS.

Species of Mollusca obtained in Corunna Bay, by R. M'ANDREW, F.R.S., F.L.S., and H. WOODWARD, F.G.S., F.Z.S., in May 1863.

CEPHALOPODA.

Loligo media, Linn. In market. | *Sepia officinalis*, Linn. Ditto.

GASTEROPODA.

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| <p><i>Murex erinaceus</i>, Linn. Frequent.
 — <i>corallinus</i>, Scacchi. Ditto.
 — <i>Edwardsii</i>, Menke. Rare.
 <i>Triton nodiferus</i>, Lam. On shore, dead.
 — <i>cutaceus</i>, Lam. Ditto.
 <i>Nassa reticulata</i>, Linn. Frequent.
 — <i>incrassata</i>, Müll. Ditto.
 — <i>pygmæa</i>, Lam. Ditto.
 <i>Ringicula auriculata</i>, Menke. Do.
 <i>Purpura lapillus</i>, Linn. Ditto.
 — <i>hæmastoma</i>. On the shore, dead.
 <i>Cassis saburon?</i>, Lam. 2 living; agrees exactly with Reeve's description and figure; but locality given for latter, Japan.
 <i>Mangelia Philberti</i>, Michaud. On shore, dead; not frequent (<i>purpurea</i>, var.?)
 — <i>attenuata</i>, Mont. Rare.
 — <i>costata</i>, Pennant. Ditto.
 — <i>nebula</i>, Mont. Ditto.
 — <i>elegans</i>, Scacchi. 1 specimen, dead.
 — <i>septangularis</i>, Mont. Shore, dead.
 — <i>Lefroyii</i>, Michaud. Rare.
 — <i>lævigata</i>, Phil. Ditto.
 — <i>brachystoma</i>, Phil. Ditto.
 — <i>linearis</i>, Mont. Ditto.
 <i>Mitra</i>, sp., large size. Various</p> | <p>worn and imperfect specimens on the shore.
 <i>Cypræa Europææ</i>, Mont. On the shore, abundant; some specimens of remarkably small size.
 — <i>candidula</i>, Gaskoin. Frequent on shore in one particular locality. The species inhabits the Madeira and Canary Islands, but has not hitherto been obtained in any other European locality.
 <i>Erato lævis</i>, Donovan. Frequent on the shore.
 <i>Natica monilifera</i>, Lam. Rare.
 — <i>nitida</i>, Don. Frequent.
 — n. sp. One specimen living.
 <i>Chemnitzia elegantissima</i>. On the shore; rare.
 <i>Eulima polita</i>, Linn. Ditto.
 <i>Cerithium reticulatum</i>, Da Costa. Frequent.
 <i>Turritella communis</i>, Risso. Not common.
 <i>Scalaria communis</i>, Lam. Not frequent.
 — <i>Turtoni</i>, Turton. Ditto.
 — <i>crenata</i>, Linn. Ditto.
 <i>Littorina rudis</i>, Don. Frequent.
 — <i>saxatilis</i>, Johnston. Ditto.
 — <i>littorea</i>, Linn. Ditto.
 — <i>littoralis</i>, Linn. Rare.</p> |
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